

W6IFE San Bernadino Microwave Society NewsLetter

President Frank Kelly WB6CWN 12653 Hubbard Sylmar CA 91342

818-362-5432 eventeinc@aol.com VP Dick Bremer WB6DNX 1664 Holly Brea CA

92621 714-529-2800 rabremer@pacbell.com Recording Sec Dick Kolbly K6HIJ 26335

Community Barstow CA 92311 619-253-2477 70541.2312@compuserve.com Correspond

Sec Larry Johnston K6HLH 16611 E Valeport Lancaster CA 93535 805-264-4110

ljohns@qnet.com Treasurer George Tillitson K6MBL PO Box 974 Wrightwood CA

92397 619-249-6622 Editor Bill Burns WA6QYR 247 Rebel Rd Ridgecrest, CA

93555 619-375-8566 bburns@ridgecrest.ca.us

The 6 **March 1997** meeting will have Dick, K6HIJ present his talk on "Tubes to Semiconductors in Microwave" in preparation for the ARRL SW Div. Convention. SBMS meets at the American Legion Hall 1024 Main Street Corona CA at 1930 hours local time. The March meeting will also have the nomination of 1997-98 officers for the April elections.

SBMS-American Legion representative needed. Come April SBMS will have only one member with key to open meeting place. We need another one or two veterans to hold keys to the meeting room door. Please contact Frank, WB6CWN if you can help us out.

Last meeting Dave K6OW presented a super tech talk on circulators, how they work, how to use them, and how to tweak them. Part 1 of his paper is enclosed. The second half will follow next month. Missing from the write up is the discussion about the frog jumping from spinning Lilly pad to spinning Lilly pad to illustrate the non-reciprocity, but it was one of those events you just had to be there for, HI.. Thanks Dave. Fred, KF6HQC carried some 10 Ghz solfan gunn oscillators in their original intruder alarm condition to the meeting and passed them out to those present. Welcome to visitors Fred Karasek, KF6HQC of Rancho Cucamonga, Martin Crundall, AC6RM of Rialto. 31 people present.

San Bernardino Microwave Society annual dinner was held at Rilos restaurant. There were 19 people present; Bill, WA6QYR and wife Judy, KC6UTF; Dave, K6OW; Joe WA6PAZ and wife; Dick, K6HIJ and wife; George, K6MBL and wife, Chuck, WA6EXV and wife; Steve WQ6S; Steve KO6KS* and wife Rebecca; Mike, AC6SX* and wife Tracy; Cliff, KD6AUN*; John, WA6BFH* and Merrills N6PON. *Tech Bench Elmers Amateur Radio Society. The conversation and food were great. Thanks to John, WA6BFH for making the arrangements.

Scheduling

19 Apr. 24 Ghz noon time SBMS event

15 Mar. "Straight Key" Home-to-Home QSO Microwave event & SSB / FM too.

10 May 1296 & 2304 Mhz ARRL Spring Sprints

14-16 Jun. ARRL June VHF QSO Party

28-29 Jun. ARRL Field Day

2-3 Aug. ARRL UHF contest

16-17 Aug. ARRL 10 GHz & up contest 1st half

12-14 Sept. 1997 ARRL SW Div. Convention in Riverside, CA.

13-15 Sept. ARRL Sept. VHF QSO Party

20-21 Sept. ARRL 10 Ghz & Up contest 2nd half

Wants and Gots for Sale Wanted HP8660B/C with option 100 signal generator main frame Frank WB6CWN 818-362-5432 Wanted HP5255 or 5256 counter plug-in, 10 Ghz xtal mount Gene WA6YOJ 909-737-7615 or eugenecran@juno.com. Wanted Gem-Link antennas Dave WB6OVZ 909-684-0932 For Sale Kenwood TH-21AT 2mtr HT, wall charger, DC-21 mobile converter Bill WA6QYR 619-375-8566

List of SBMS Tubes donated by Kerry N6IZW (San Diego Microwave Group) (those left 2-18-97) 2C39 - 3 ea., 4CX150G, 6DQ5 - 7 ea., 6DQ6 - 6 ea., VT212 - 2 ea., 958a, 1247 - 4 ea., 4042, 4043, 5642 - 5 ea., 5675 - 17 ea., 5767 - 3 ea., 5836, 5889, 6080wc - 5 ea., 6146 - 3 ea., 6360 - 14 ea., 6929, 7644 - 2 ea., 7699, 8422, 9001, 9002, 9003, 9005 - 5 ea., 9006 - 3 ea.; nuvistors- 6CW4 - 12 ea., 7586 - 7 ea., 7895 - 3 ea., 8056 - 4 ea., 8393 - 9 ea. Contact Bill WA6QYR for what you need. 247 Rebel Road Ridgecrest, CA 93555 619-375-8566 bburns@ridgecrest.ca.us or WA6QYR@WA6YBN.#SOCA.CA.USA.NOAM.

The Ham Radio Microwave Reflector has been started !!!! In order to use it you must subscribe... I have NOT entered your address automatically. The same information that I am presenting below can be read on the www.walmba.org reflector page. To sign up you must send a message with no particular subject, and the body of the message with the single word SUBSCRIBE to one (or more) of the following addresses: MicrowaveEast-request@walmba.org or MicrowaveWest-request@walmba.org or MicrowaveNonUS-request@walmba.org. The expectation is that the country is split at the Mississippi, and that folks in the East might have regional information that is of no interest to folks in the West (such as plans for a contest). When you want to send a message to a group, use the following addresses in your message: MicrowaveEast@walmba.org or MicrowaveWest@walmba.org or MicrowaveNonUS@walmba.org or Microwave@walmba.org. For instance, to send a message to all US addresses, send it To: MicrowaveEast@walmba.org, MicrowaveWest@walmba.org to send a message to everyone on all lists, send it To: Microwave@walmba.org Please let me know if you have any problems. Tom Williams WA1MBA no frequency high enough tomw@walmba.org.

New Microwave Web Site--G3PHO Microwave Pages at: <http://members.aol.com/g3pho/ghz.htm>. You might care to take a look at this, my "World Above 1000 MHz" web site...have just uploaded a lot of new stuff, news, photos, & improved diagrams....Constructive comments earnestly sought! Thanks Peter Day G3PHO@aol.com

Another microwave web site has been set up by SBMS member Dave, WA6CGR for the dissemination of technical data, projects and stuff. <http://www.ham-radio.com/wa6cgr/>. SBMS member Al, K6LJM has a ATV & VHF site at <http://www.local.net/~k6ljm/>.

UK 10 GHz DX RECORD EXTENDED-- Bob, G3GNR, located at Highampton, in Devon, South West England, (IO70WT) made a remarkable 10 GHz contact on 14 January 1997 when, at 2335GMT, he made a two way cw contact with SM6ESG located in JO67CC, Sweden. Bob was running 12 watts to his dish (no details on its diameter...possibly around 60 cm) while the SM ran 40 watts. Reports of RST559 were exchanged. The

distance involved was a staggering 1275 kilometres, easily beating the previous best from the UK held by G0VHF at 1185 km. Thanks WB6CWN.

ARRL PACIFIC DIVISION UPDATE MARCH, 1997 by Brad Wyatt, K6WR, Director, Pacific Division, ARRL 18400 Overlook Rd. #5, Los Gatos CA 95030-5850 (408) 395-2501 (Phone and FAX) Packet: K6WR@N0ARY.#NOCAL.CA Internet: K6WR@arrl.org WWW Pacific Division Home Page -- <http://www.pdarrl.org/> ARRL WRC-99 Committee Report Released; Proposes New Licensing Plan:- The ARRL WRC-99 Committee Report has now been released. The full report is available on the ARRL Web site. A full discussion will appear in March QST at page 55. The report is based in part on an analysis of the recent ARRL survey, as reported on page 54 of February QST. One of the results that is receiving a great deal of attention is that most amateurs want to retain some form of code requirement for access to the HF bands. From ballots received for the Pacific Division, it is clear that we are very consistent with the nationwide results. Thanks to all in the Division who completed and returned the QST questionnaires. Also appearing in the report is a proposal, still in the talking stages, for a new licensing structure for US hams. Remember, this is only a proposal. Please read this proposal and offer your comments to ARRL and to me. VHF, UHF and Microwave Bands Now Under Active Challenge:- 2m/70cm Band Threats -- The Little LEO folks have changed their strategy at 2 meters. They no longer appear to be studying the entire band from 144 to 148 MHz, but rather are now focusing on 146 to 148 MHz. This is because 144 to 146 MHz is an exclusive amateur allocation worldwide, while 146 to 148 MHz is not. Meetings are held on a regular basis by the U.S. State Department, the FCC, and other governmental agencies, discussing the Little LEO proposals as well as a host of other matters. The purpose of the meetings is to establish formal U.S. policy on matters of this sort. The ARRL participates in these meetings, representing the interests of the amateur radio community. It now seems possible that the U.S. delegation position for WRC-97 may NOT include support for Little LEO access to these bands, but the threat could come from somewhere else. For more information, see the K1ZZ editorial on p. 9, Feb. QST; ARRL Letter, Vol. 16, No. 6, Feb. 7, 1997. The Federal Emergency Management Agency (FEMA) has issued a statement supporting the hams' continued use of the 2 meter and 70 cm. bands. However, another challenger has appeared: NASA/JPL and other space agencies are looking at the 70 cm. band for a satellite-carried synthetic aperture radar system (see page 72 of January QST). 2300-2310 MHz Band Threat -- The ARRL petition to keep our secondary status at 2305-2310 MHz and asking for primary at 2300-2305 MHz is still awaiting action by FCC. There seems to be a real chance that this just might work. See Jan. QST, p. 16; Feb. QST, p. 16 and the ARRL WWW site. 5800 MHz Band Threat -- New Sharing Services in 100 MHz of Band -- The new sharing service described in the Pacific Division Update for February 1997 has not changed, so it appears this new plan for the unlicensed devices called a U-NII device (Unlicensed NII) will stand. This additional sharing service comes as a result of NPRM ET Docket 96-102, based on petitions from Apple Computer and WINForum. The petitions asked for access to the 5725-5875 MHz band for the NII/SUPERNET proposal for free spectrum. They proposed to use the spectrum for very high data rate LANs and other services for schools, libraries, and hospitals. ARRL and many other commenters opposed this NPRM. There may yet be petitions for reconsideration filed.

ARRL PACIFIC DIVISION UPDATE SPECIAL EDITION -- FEBRUARY 17, 1997 Little LEO Threat to 2 meters, 220 MHz and 70 cm.; Action Needed NOW:-- It is critically important that we all send e-mail to FCC again to support the ARRL/AMSAT position which opposes the Little LEO threat to 2 meters and 70 cm., and as of February 13, 1997, - 219-220 and 222-225 MHz as well! At the February 13, 1997 meeting of FCC Informal Working Group (IWG) 2A that has been preparing draft proposals for the 1997 World Radiocommunication Conference (WRC-97), little LEO (low-Earth-orbit) proponents for the very first time proposed including 219-225 MHz in their list of desired allocations for their non-voice non-geostationary (NVNG) mobile-satellite service (MSS). The little LEOs' strategy for WRC-97 is to propose broad allocations on the theory that most administrations would find reasons to oppose little LEO use of specific bands in the crowded spectrum below 1 GHz, but that a broad allocation would permit different implementations in different countries depending on local circumstances. Their document is identified as IWG-2A/86(Rev. 6). At the February 13 meeting, a coalition of spectrum interests including land mobile, amateur, broadcasting, and military representatives opposed the flexible allocation concept on three grounds: that the concept is simply an invention to avoid performing technical sharing studies that would demonstrate the infeasibility of sharing, that it is inconsistent with decades

of ITU allocations practices, and that if adopted, the concept would be counter to U.S. interests. The coalition document is identified as IWG-2A/107. The ARRL and AMSAT submitted a further statement of opposition, citing the absence of any technical studies that might support sharing with the amateur service or the amateur-satellite service and pointing out that the little LEOs have completely mischaracterized the nature of ITU Resolution 640 regarding the use of certain amateur bands in the event of natural disasters. The ARRL/AMSAT paper, revised to reflect opposition to the late proposal to include 219-225 MHz, is identified as IWG-2A/108(Rev. 1). Also of interest to radio amateurs will be the comments of the Department of Defense, identified as IWG-2A/101(Rev. 1), as they address sharing problems in the 430-450 MHz bands. Here is what you should write to FCC now to support the ARRL/AMSAT position contained in (IWG-2A/108 Rev. 1): Send a brief e-mail message to: Address: wrc97@fcc.gov. Subject line: "Reference No. ISP-96-005 IWG-2A." Message should, at least, say: "I support the ARRL/AMSAT opposition, as stated in IWG-2A/108(Rev. 1), to the NVNG MSS flexible allocation proposal". Any additional arguments or evidence you may wish to provide would, of course, also be welcome. Your comment will be included in the public record and will be helpful in driving home the point that there is broad-based opposition to poorly conceived sharing proposals. NOTE: The proposals the ARRL/AMSAT opposes are NOT FCC proposals, nor are they endorsed by any other branch of the government. They are industry proposals. The ARRL/AMSAT objective is to demonstrate there is broad citizen opposition to the industry proposals, so the government will not adopt them as U.S. proposals. So, please don't "flame" the FCC if you comment. IMPORTANT: COMMENTS SHOULD REACH THE FCC NO LATER THAN MARCH 4, 1997. FINAL NOTE: The complete text of these four documents can be found in the ARRL WWW site at <http://www.arrl.org/>. Locate the "Band Threat News" section, then find the Feb. 14, 1997, entry. At the bottom of this entry is a link to these documents. For those of you who do not have access to the ARRL WWW site, I am obtaining ASCII versions of these documents and will be happy to send them to you via e-mail. I have IWG-2A/101(Rev. 1), 107, and 108(Rev. 1) in hand. Unfortunately, the document which started all this is the one from the Little LEO folks --- IWG-2A/86(Rev. 6). It is some 21 pages long, double spaced, and full of tables and footnotes - hence difficult to put into ASCII format. Thanks to Paul Burton, AA6Z, and Jim Maxwell, W6CF, Vice Director, for their efforts in making these documents available in ASCII format.

Local Phone Companies Want to Bill Internet Users I am writing you this to inform you of a very important matter currently under review by the FCC. Your local telephone company has filed a proposal with the FCC to impose per minute charges for your Internet service. They contend that your usage has or will hinder the operation of the telephone network. It is my belief that Internet usage will diminish if users were required to pay additional per minute charges. The FCC has created an email box for your comments, responses must be received by February 13, 1997. Send your comments to isp@fcc.gov and tell them what you think. Every phone company is in on this one, and they are trying to sneak it in just under the wire for litigation. Let everyone you know here this one. Get the e-mail address to everyone you can think of. isp@fcc.gov Please forward this email to all your friends on the Internet so all our voices may be heard! Thanx Tom Williams WA1MBA

24 Ghz outing-- On 20 February 1997 Chuck, WA6EXV, Phil, W6HCC and Bill, WA6QYR set out for a test to extend local 24 Ghz DX. The plan was to work Walts Point DM06WL to Heaps Peak DM14KF (165 miles) with Bill in the middle at El Paso Peak DM15DL. Chuck and Bill left a nice sunny morning in Ridgecrest, CA to travel to parts of the planned path. Chuck and wife, Jean drove north on highway 395 to Lone Pine and then up into the Sierras where they found winter rock slide debris and high winds. High winds were kicking up Owens Lake (dry lake) dust and making dish pointing impossible, so they turned around and came home. Phil and wife, Marilan drove from Cherry Valley, CA up in to the San Bernardino mountains where some snow was still around but the road to the peak was clear. Lots of clouds and north winds on the south end made the contact doubtful. Bill put his 1977 Scout in four wheel drive and found a ridge near El Paso Pk that looked both north and south. Bill's site was in the sun with wildflowers and a north wind blowing. Bill and Phil decided since they were in place to give the shot a try even though the clouds in the south made it less than good for 24 Ghz. Early attempts weren't successful. The winds had shifted to the east by then and the clouds started moving. Waiting a about an hour allowed the haze and clouds to move off and visibility between the sites to improve. After a half hour of pointing and tuning (about 1 degree beamwidths and 90 KHz bandwidths) contact was made. Additional tweaking brought full quieting wideband FM full duplex signals. 92 miles over the Rand Mountains (not direct line of sight)-not bad for 24 Ghz under 100 mw WBFM stations. An 18 inch DSS offset feed dish on one end and 24 inch dish on the other. Ah,

Spring has come. 73's Bill

Back to the [SBMS Home Page](#).